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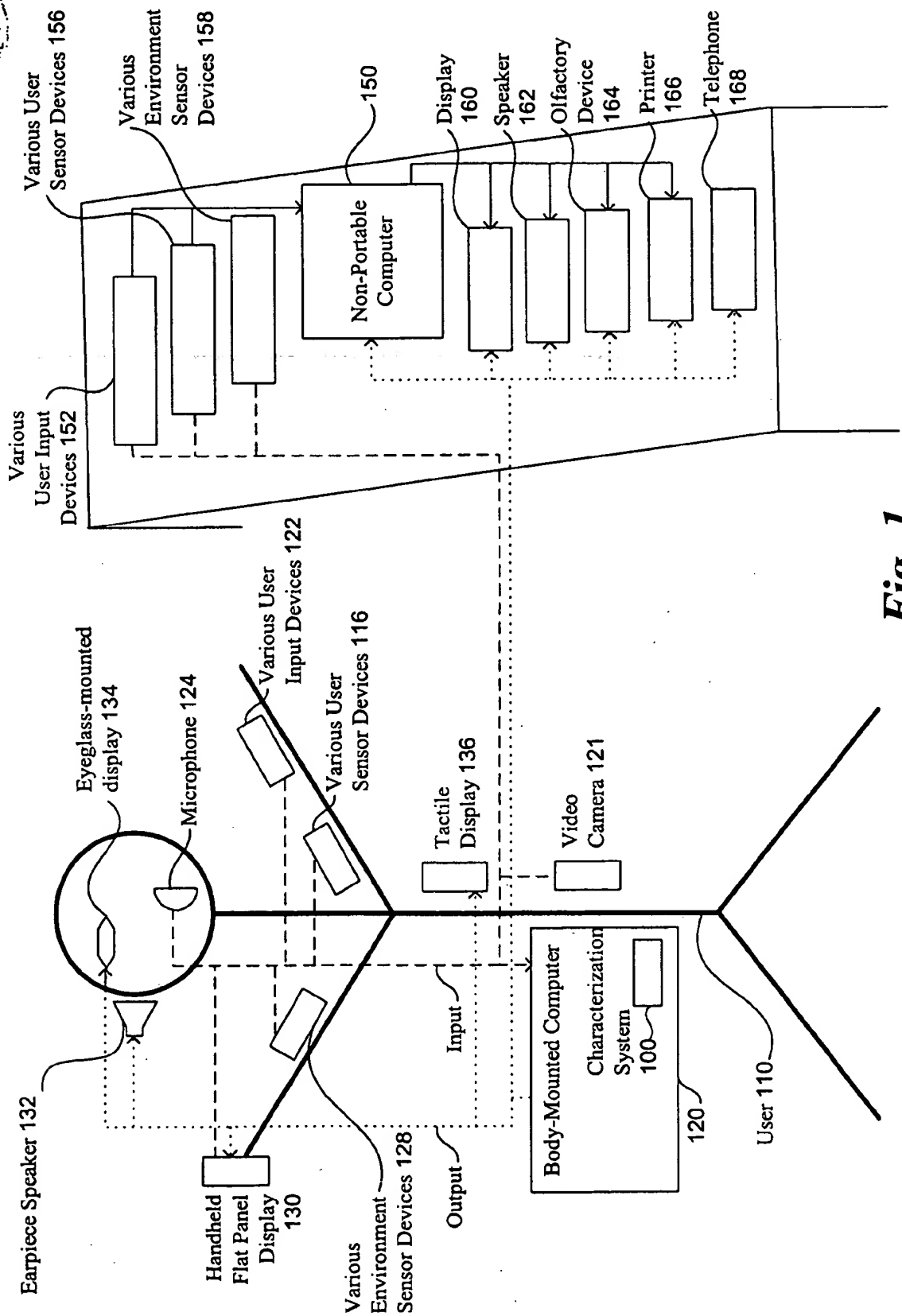

Fig. 1

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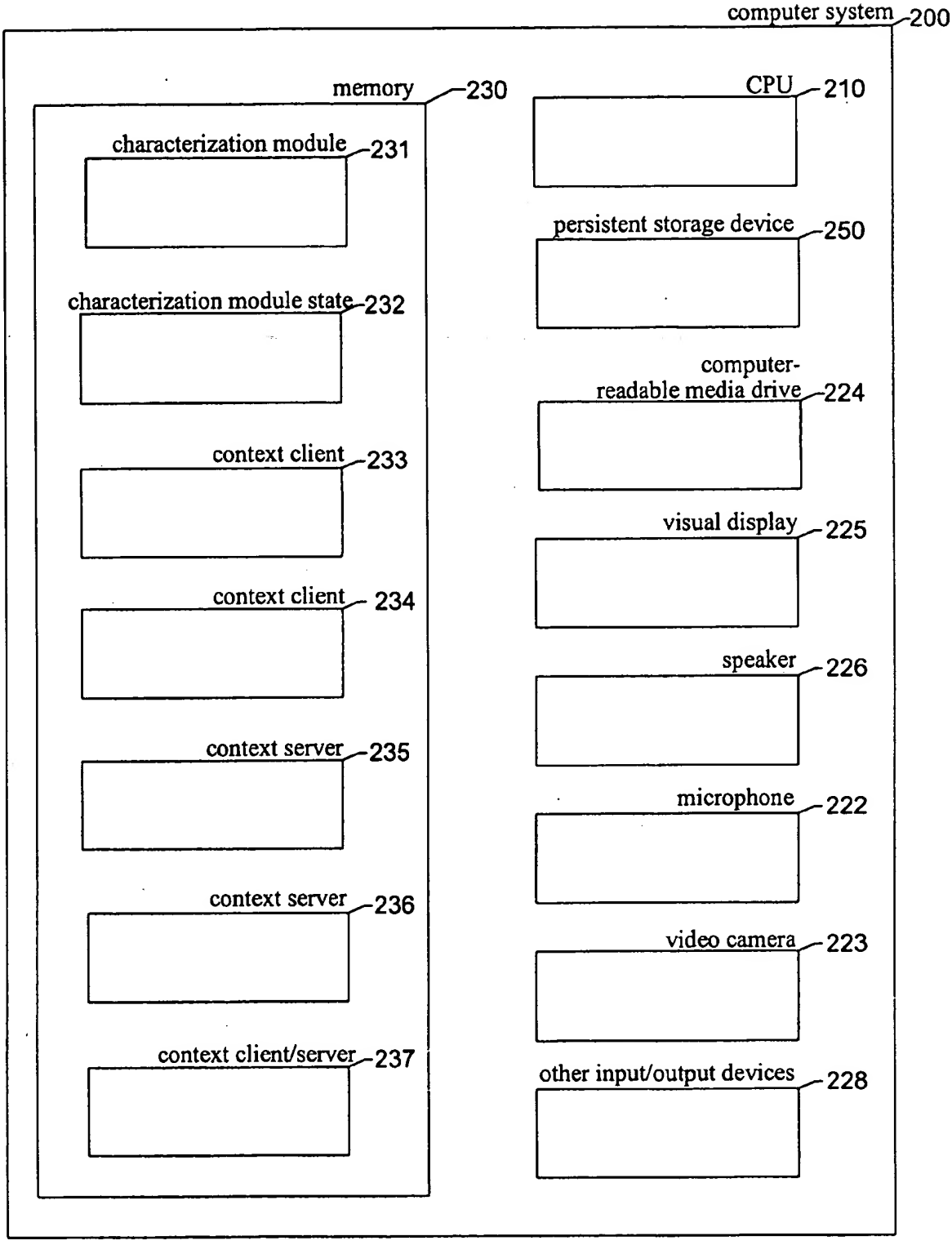

Fig. 2

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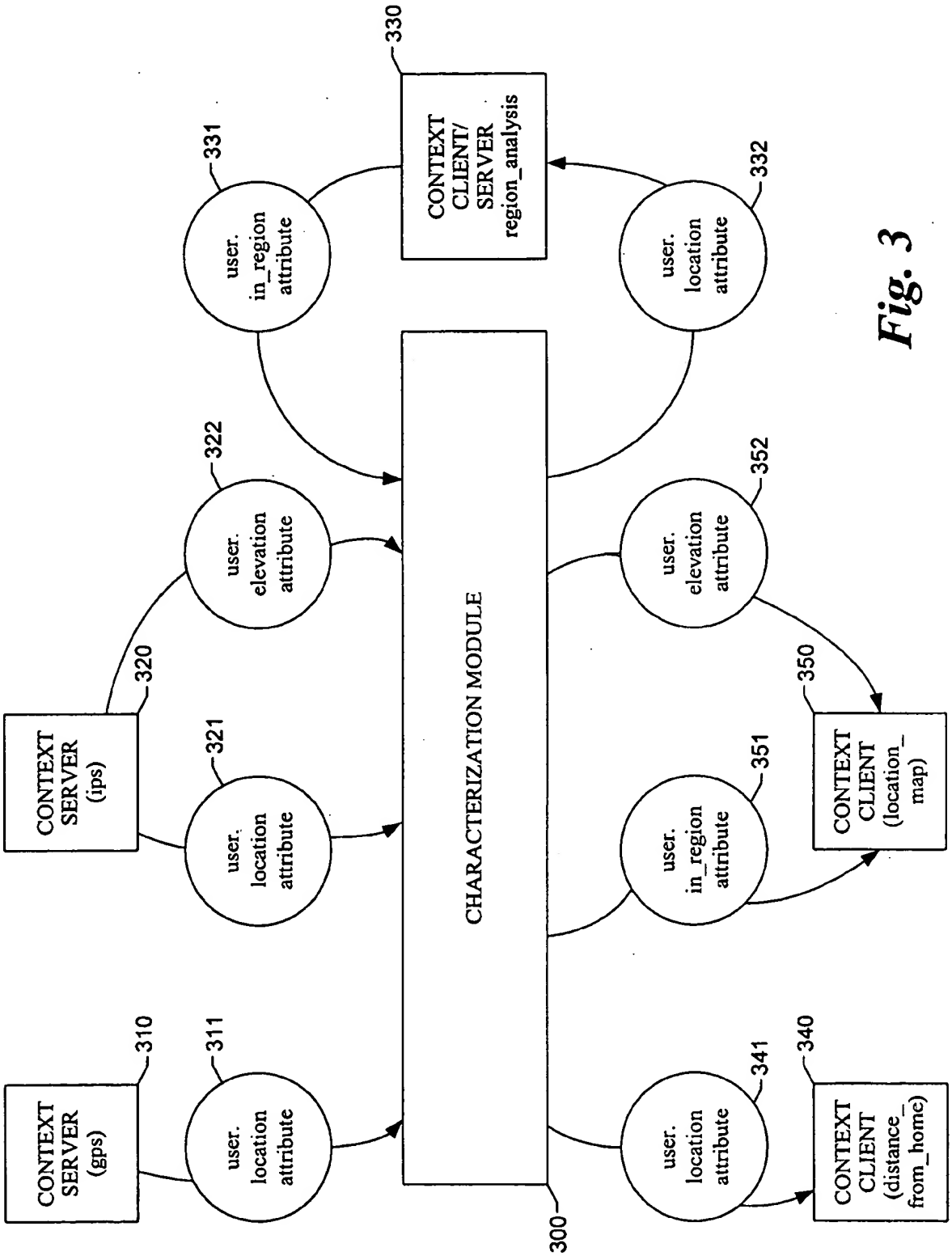

Fig. 3

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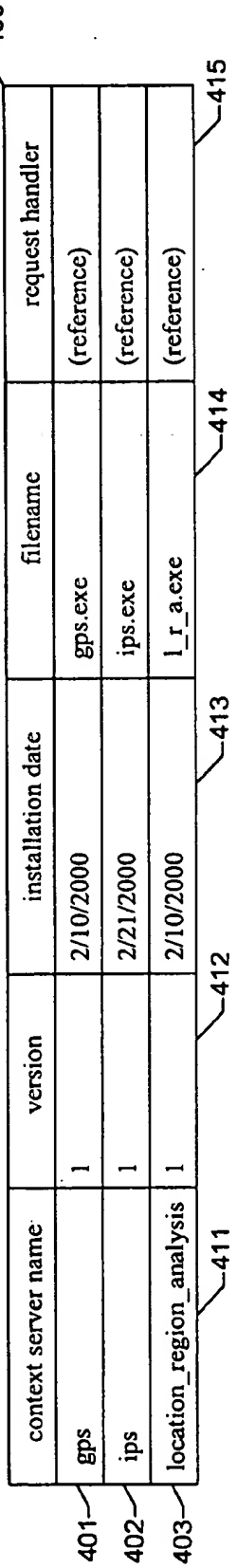

Fig. 4

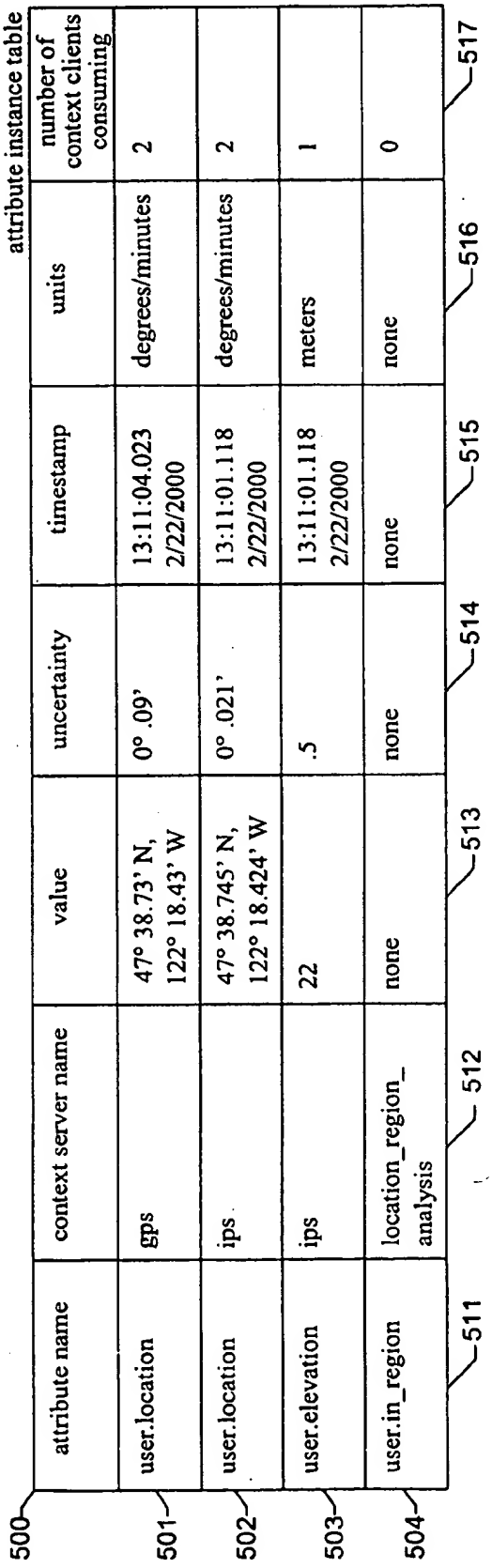

Fig. 5

Serial No. 09/724,777 Docket No. 890057.419C1
Inventor(s): Kenneth H. Abbott et al.
Express Mail No. EV447226175US "REPLACEMENT SHEET"

600 context client table

context clent name	message handler
601 location_map	(reference)
602 distance_from_home	(reference)
603 region_analysis	(reference)

611 612

Fig. 6

700 attribute instance table

attribute name	context server name	value	uncertainty	timestamp	units	number of context clients consuming
701 user.location	gps	47° 38.73' N, 122° 18.43' W	0° .09'	13:11:04.023 2/22/2000	degrees/minutes	2
702 user.location	ips	47° 38.745' N, 122° 18.424' W	0° .021'	13:11:01.118 2/22/2000	degrees/minutes	2
703 user.elevation	ips	22	.5	13:11:01.118 2/22/2000	meters	1
704 user.in_region	location_region_ analysis	none	none	none	none	1

711 712 713 714 715 716 717

Fig. 7

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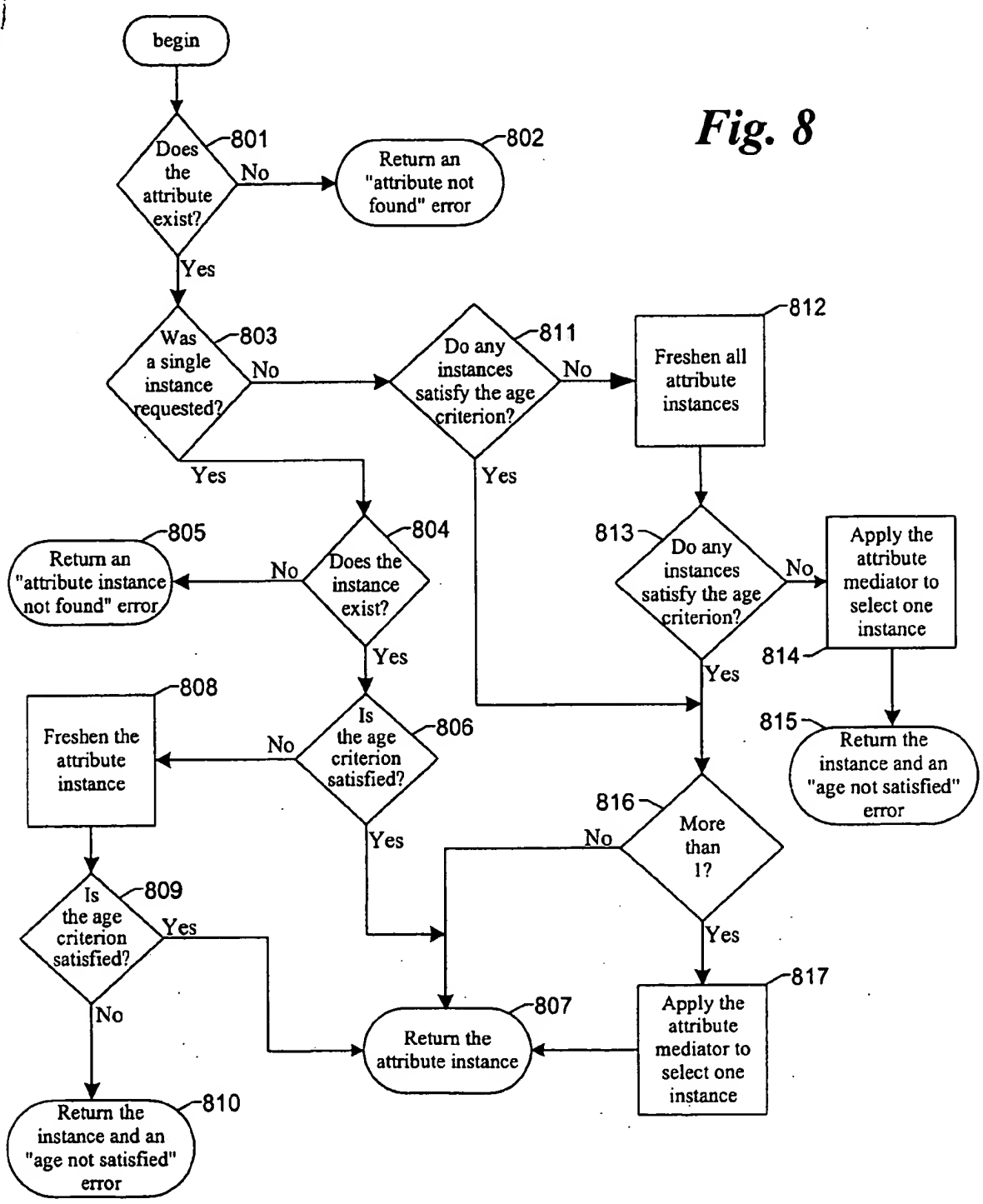

Fig. 8

Serial No. 09/724,777 Docket No. 890057.419C1
Inventor(s): Kenneth H. Abbott et al.
Express Mail No. EV447226175US "REPLACEMENT SHEET"

SEP 15 2004 TRADEMARK OFFICE

attribute instance table

	attribute name	context server name	value	uncertainty	timestamp	units	number of context clients consuming
901	user.location	gps	47° 38.73' N, 122° 18.43' W	0° .09'	13:11:04.023 2/22/2000	degrees/minutes	2
902	user.location	ips	47° 38.745' N, 122° 18.424' W	0° .021'	13:11:01.118 2/22/2000	degrees/minutes	2
903	user.elevation	ips	22.25	.5	13:11:06.565 2/22/2000	meters	1
904	user.in_region	region_analysis	none	none	none	none	1
	911	912	913	914	915	916	917

900

Fig. 9

condition table

	condition name	context client name	first logical parameter	second logical parameter	comparison value	logical operator
1001	in_region_true	region_analysis	user.in_region	none	TRUE	=
	1011	1012	1013	1014	1015	1016

1000

Fig. 10

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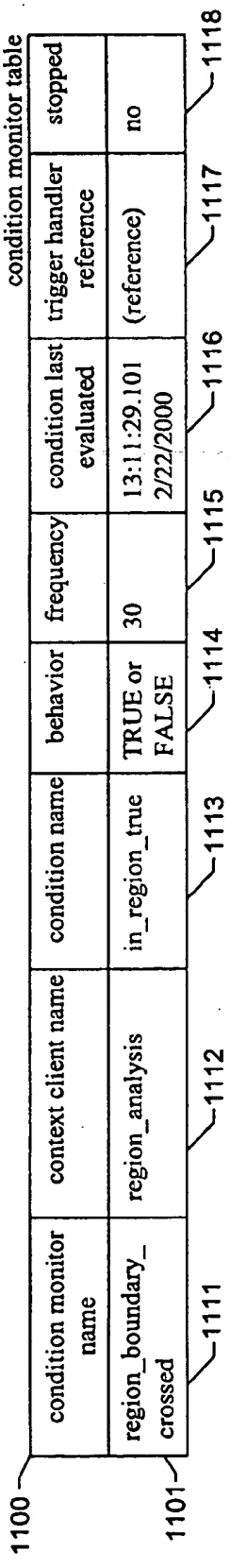

Fig. 11

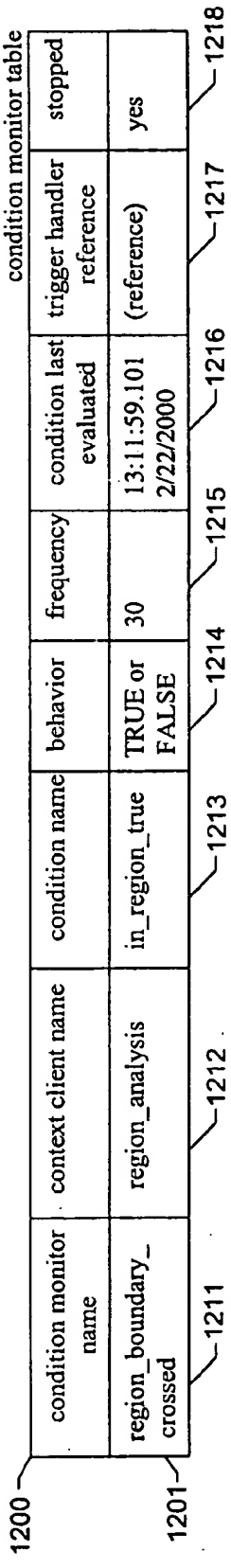

Fig. 12

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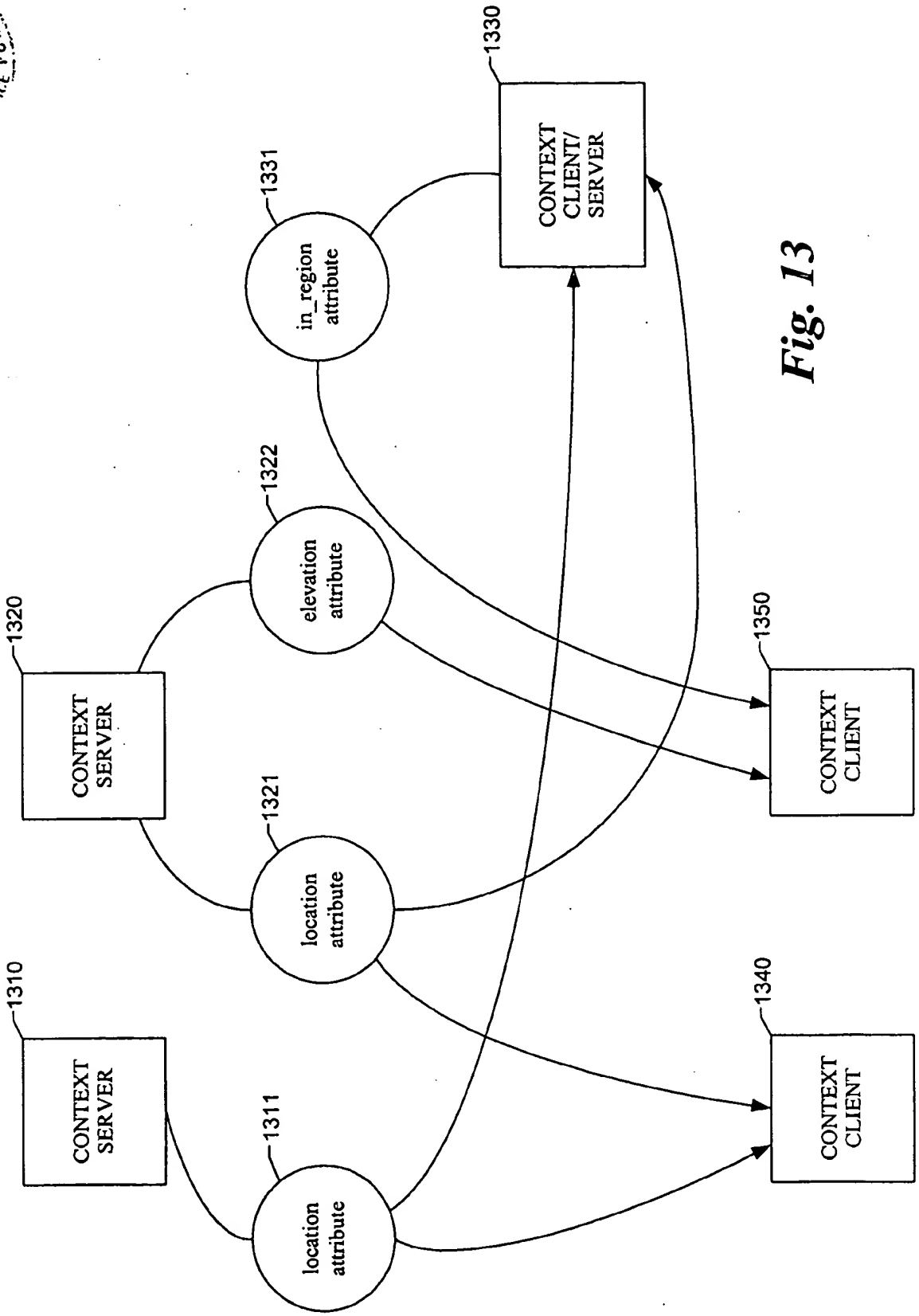

Fig. 13

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attribute request table

	attribute name	context client name
1401	user.location	distance_from_home
1402	user.in_region	location_map
1403	user.location [gps]	location_region_analysis
1404	user.elevation	location_map

1411 1412

Fig. 14

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- **User.**
  - Desired_privacy_level
  - Interruptibility
  - Speed
  - Direction
  - Acceleration
  - Availability.
    - Cognitive_availability
    - Tactile_availability
    - Manual_availability
    - Visual_availability
    - Oral_availability
    - Auditory_availability
  - Proximity.<Item or place name>
  - Mood.
    - Happiness
    - Sadness
    - Anger
    - Frustration
    - Confusion
  - Activity.
    - Driving
    - Eating
    - Running
    - Sleeping
    - Talking
    - Typing
    - Walking
  - Location.
    - Place_name
    - Latitude
    - Longitude
    - Altitude
    - Room
    - Floor
    - Building
    - Address
    - Street
    - City
    - County
    - State
    - Country
    - Postal_Code
  - Destination. (same as User.Location.)
  - Physiology.
    - Pulse
    - Body_temperature
    - Blood_pressure
    - Respiration
- **Person.**<name or ID>. (same as User.)
- **Platform.**
  - UI.
    - Oral_input_device_availability
    - Manual_input_device_availability
    - Tactile_output_device_availability
    - Visual_output_device_availability
    - Auditory_output_device_availability
- **Platform.** (continued)
  - CPU.
    - Load
    - Speed
  - Memory.
    - Total_capacity
    - Used
  - Storage.
    - Total_capacity
    - Used
  - Connectivity.
    - Connection_status
    - Connection_speed
    - Connection_type/device
    - Connection_activity
  - Power.
    - Power_source
    - Power_level
- **Environment.**
  - People.
    - Nearest
    - Number_present
    - Number_close
  - Local.
    - Time
    - Date
    - Temperature
    - Pressure
    - Wind_speed
    - Wind_direction
    - Absolute_humidity
    - High_forecast_temperature
    - Low_forecast_temperature
    - People_present
    - Ambient_noise_level
    - Ambient_light_level
    - Days.<previous or future>.
      - High_temperature
      - Low_temperature
      - Precipitation_type
      - Precipitation_amount
  - Place.<place name>. (same as Environment.Local)
- **Application.**
  - Mail.
    - Available
    - New_messages_waiting
    - Messages_waiting_to_be_sent
  - Phone.
    - Available
    - In_use
    - On/off
    - Notification_mechanism
    - Call_incoming
    - Caller_ID
  - Sound_recorder.
    - Available
    - Recording

Fig. 15

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Fig. 16

1) User Setting
   a) Mental Context
      i) Meaning
      ii) Cognition
         (1) Divided User Attention
         (2) Task Switching
         (3) Background Awareness
      iii) Solitude
      iv) Privacy
         (1) Desired Privacy
         (2) Perceived Privacy
      v) Social Context
      vi) Affect
   b) Physical Situation
      i) Body
         (1) Biometrics
         (2) Posture
         (3) Motion
         (4) Physical Encumberment
            (a) Senses
               (i) Eyes
               (ii) Ears
               (iii) Tactile
               (iv) Hands
               (v) Nose
               (vi) Tongue
            (b) Workload demands/effects
            (c) Interaction with computer devices
            (d) Interaction with people
            (e) Physical Health
      ii) Environment
         (1) Time/Space
         (2) Objects
         (3) Persons
            (a) Audience/Privacy Availability
               (i) Scope of Disclosure
               (ii) Hardware affinity for privacy
               (iii) Privacy Indicator for User
               (iv) Privacy Indicator for Public
               (v) Watching Indicator
               (vi) Being Observed Indicator
         (4) Ambient Interference
            (a) Visual
            (b) Audio
            (c) Tactile

2) Computer
   a) Power
   b) Configuration
      i) User Input Systems
         (1) Hand/Haptic
            (a) Keyboard/Keystrokes
         (2) Voice/Audio
         (3) Eye Tracking
         (4) Cursors
            (a) Axis
            (b) Resolution
               (i) Selection
               (ii) Invocation
            (c) Accelerators
      ii) Output Systems
         (1) Visual
            (a) Resolution
         (2) Audio
            (a) Public/Private
         (3) Haptic
      iii) External Resources
         (1) I/O devices
         (2) Connectivity
   c) Data
      i) Quantity/State
      ii) Urgency/Importance
         (1) Use of Prominence
      iii) Modality
      iv) Sensitivity/Purpose
         (1) Privacy Issues
         (2) Use of Association
         (3) Use of Safety
      v) Source/Ownership
         (1) Types
            (a) User generated
            (b) Other computers or people
            (c) Sensor
            (d) PC State
         (2) Use of Association

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Fig. 17

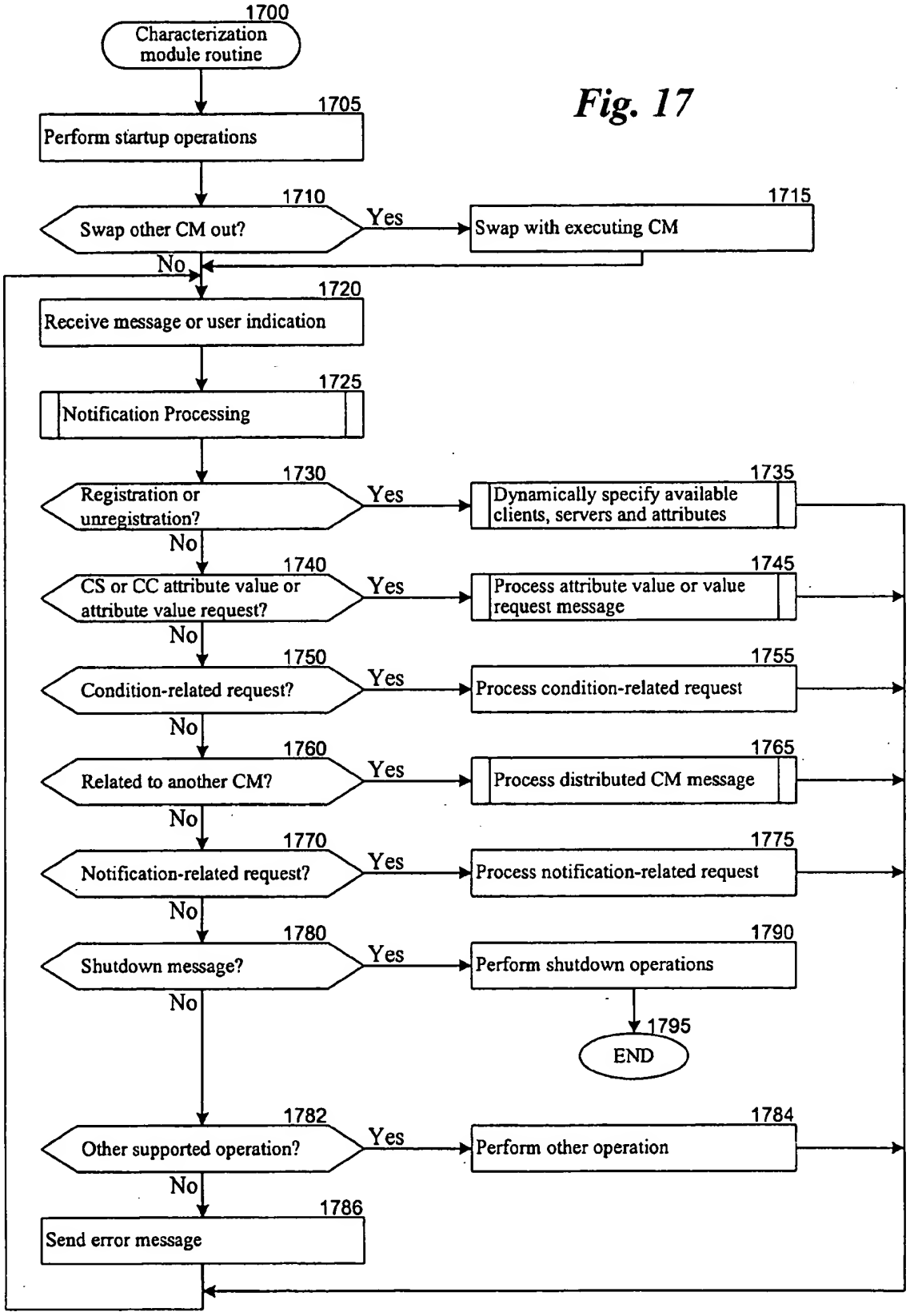

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Fig. 18

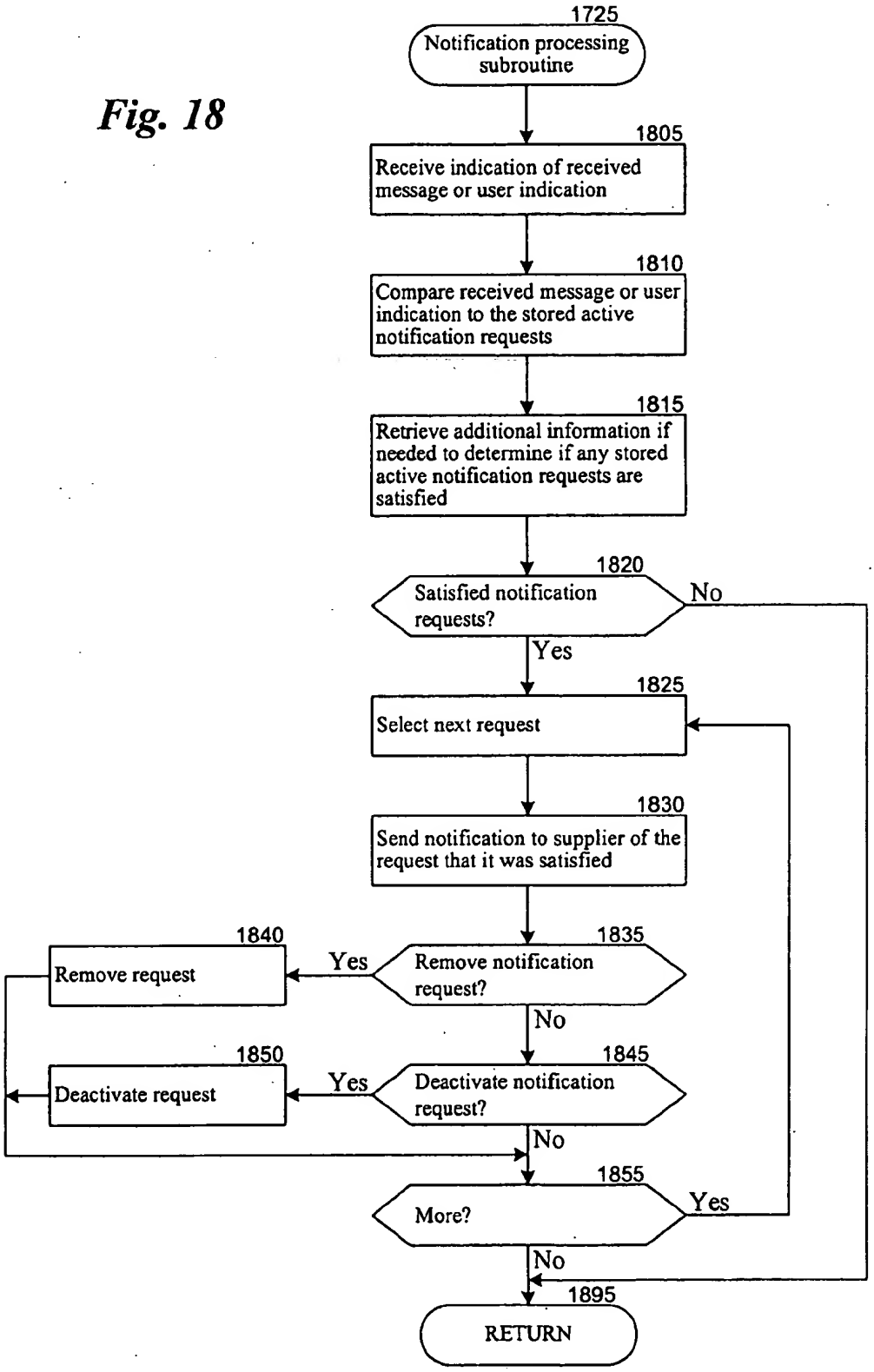

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Fig. 19

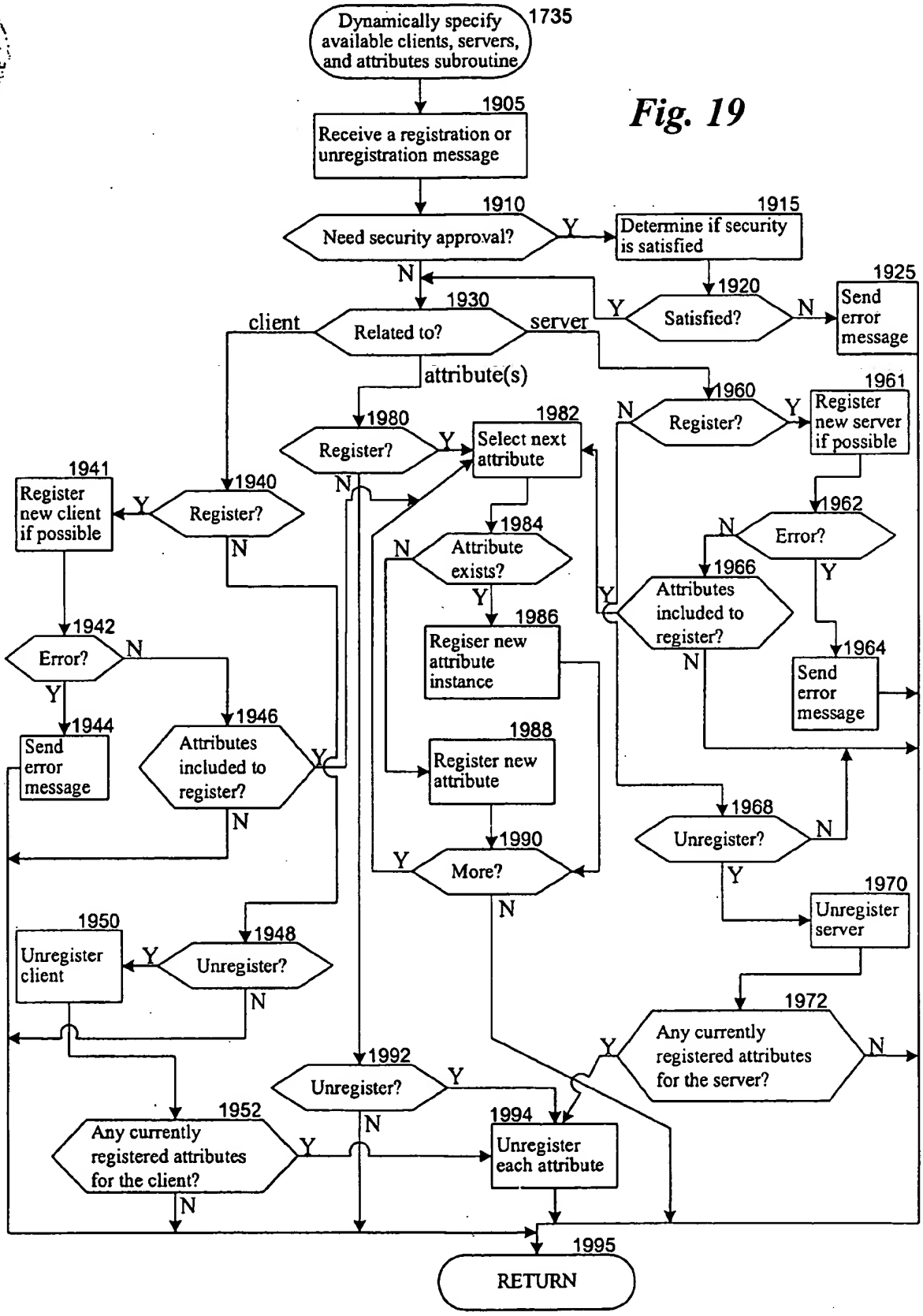

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Fig. 20A

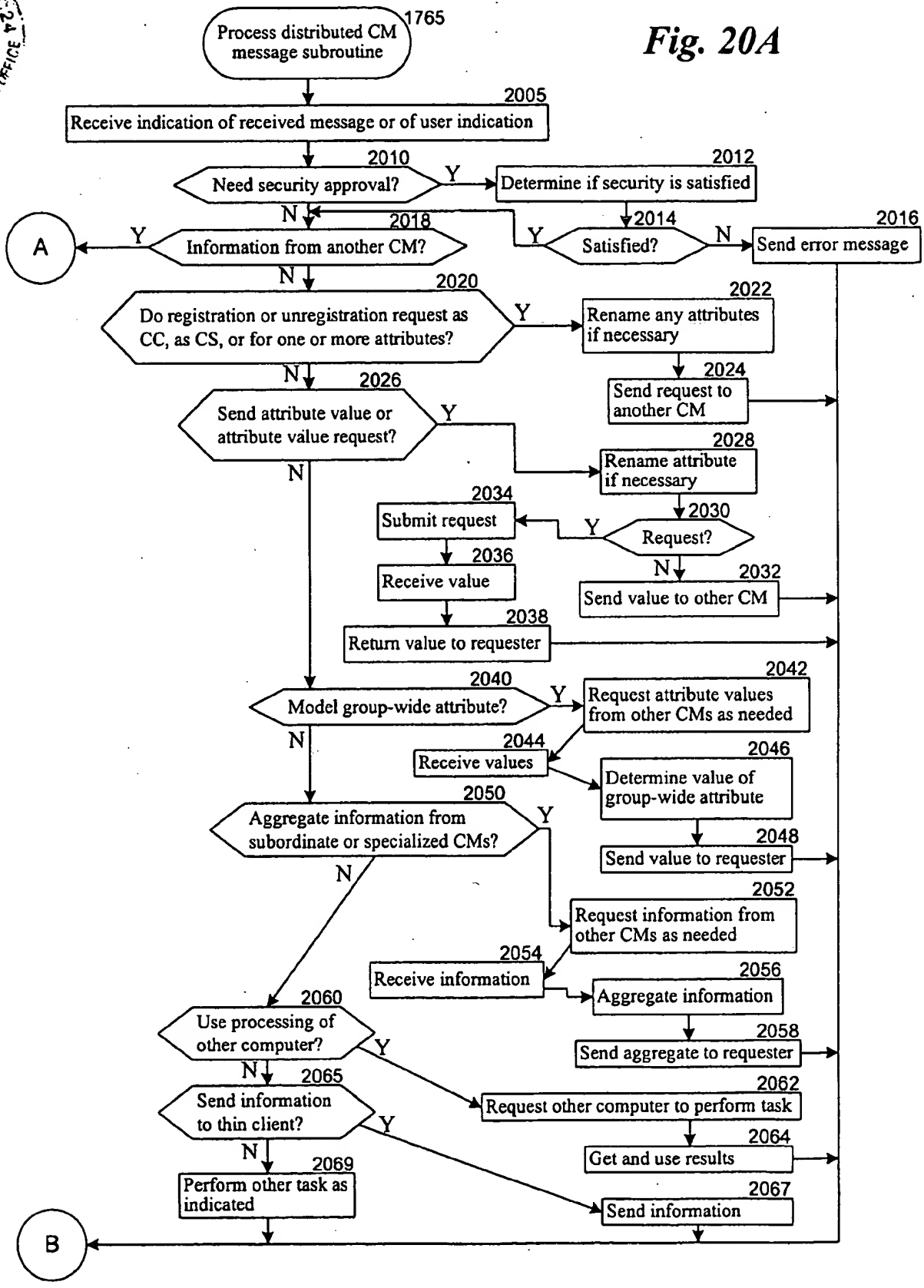

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Fig. 20B

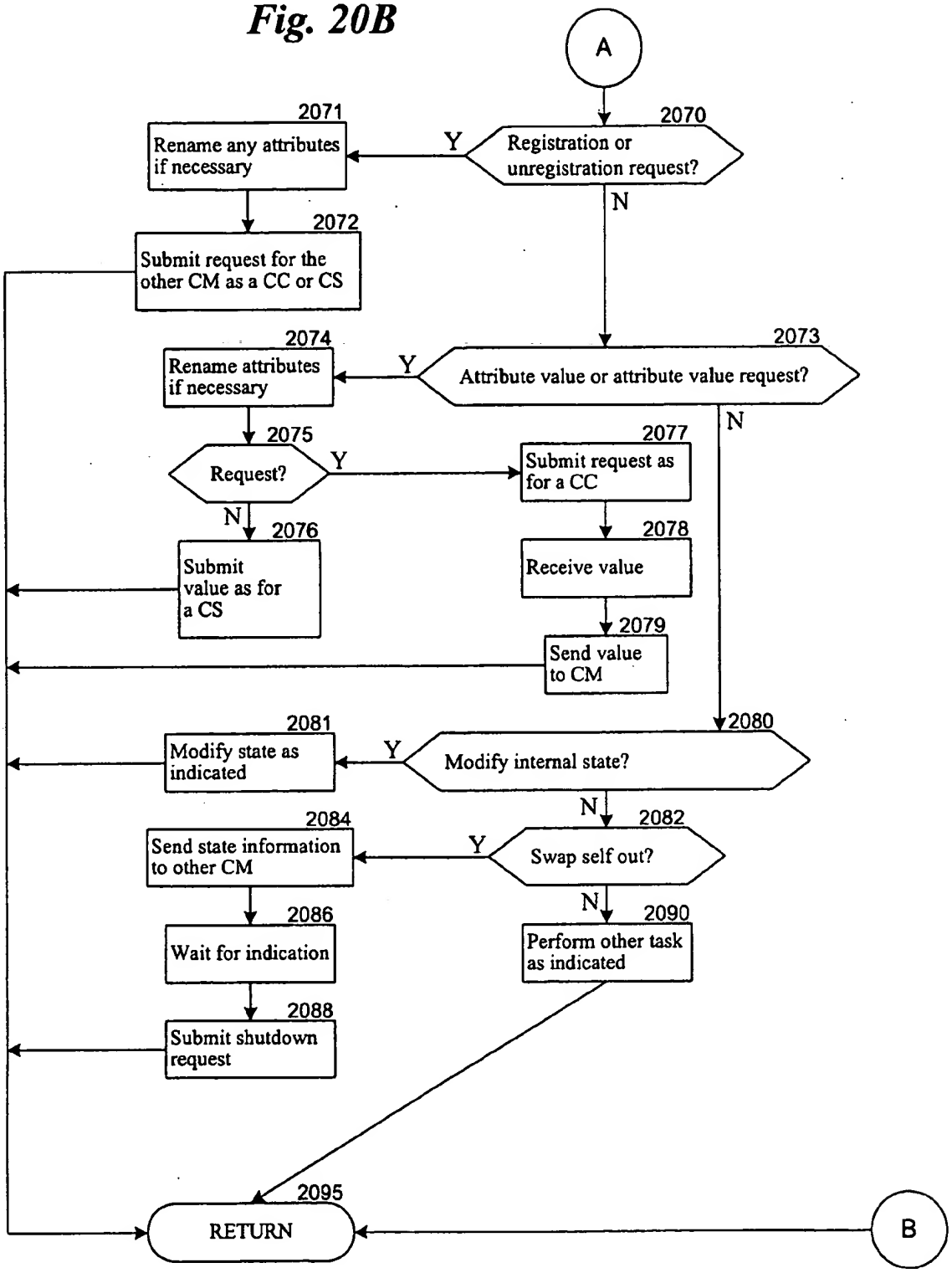

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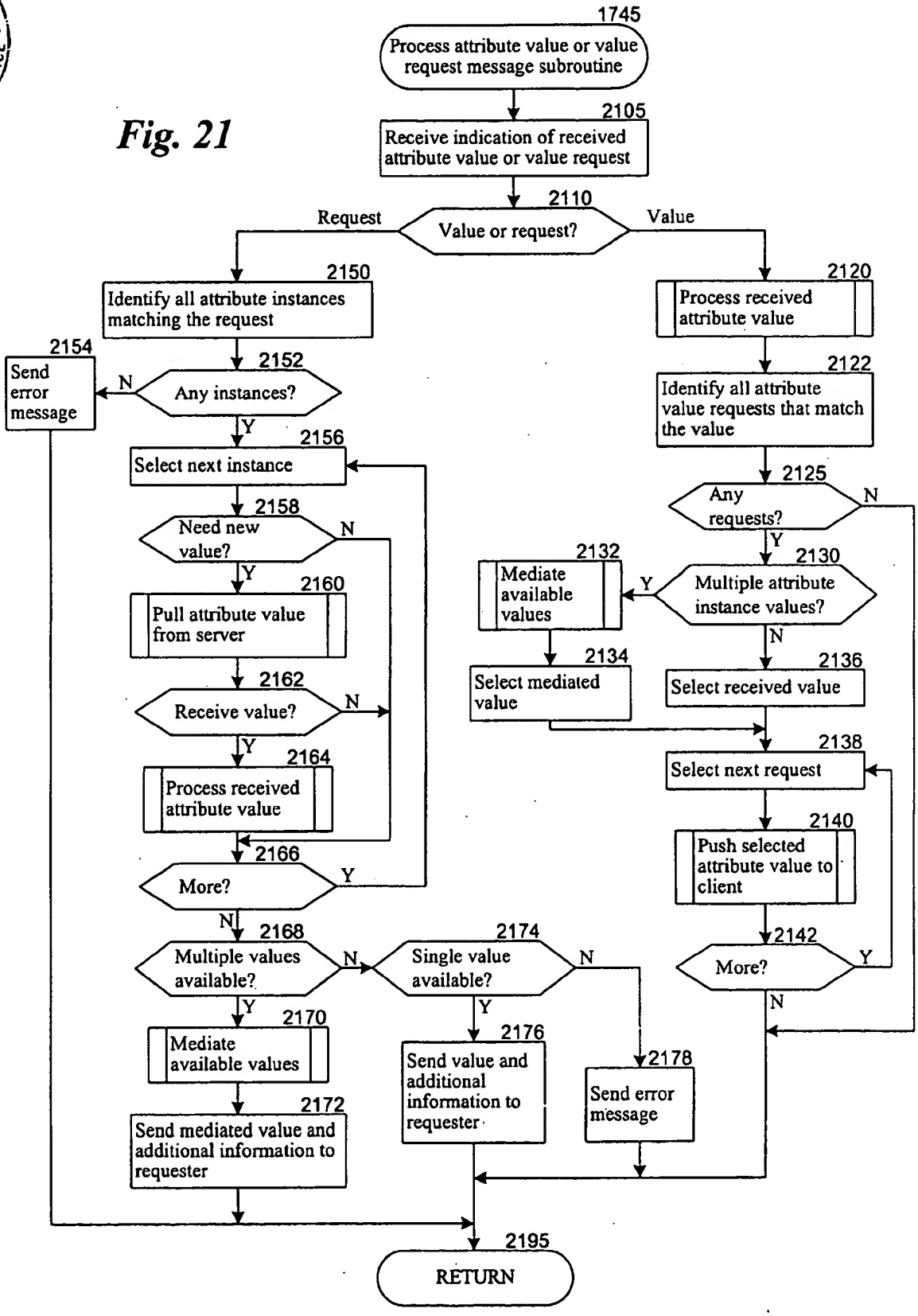
Fig. 21



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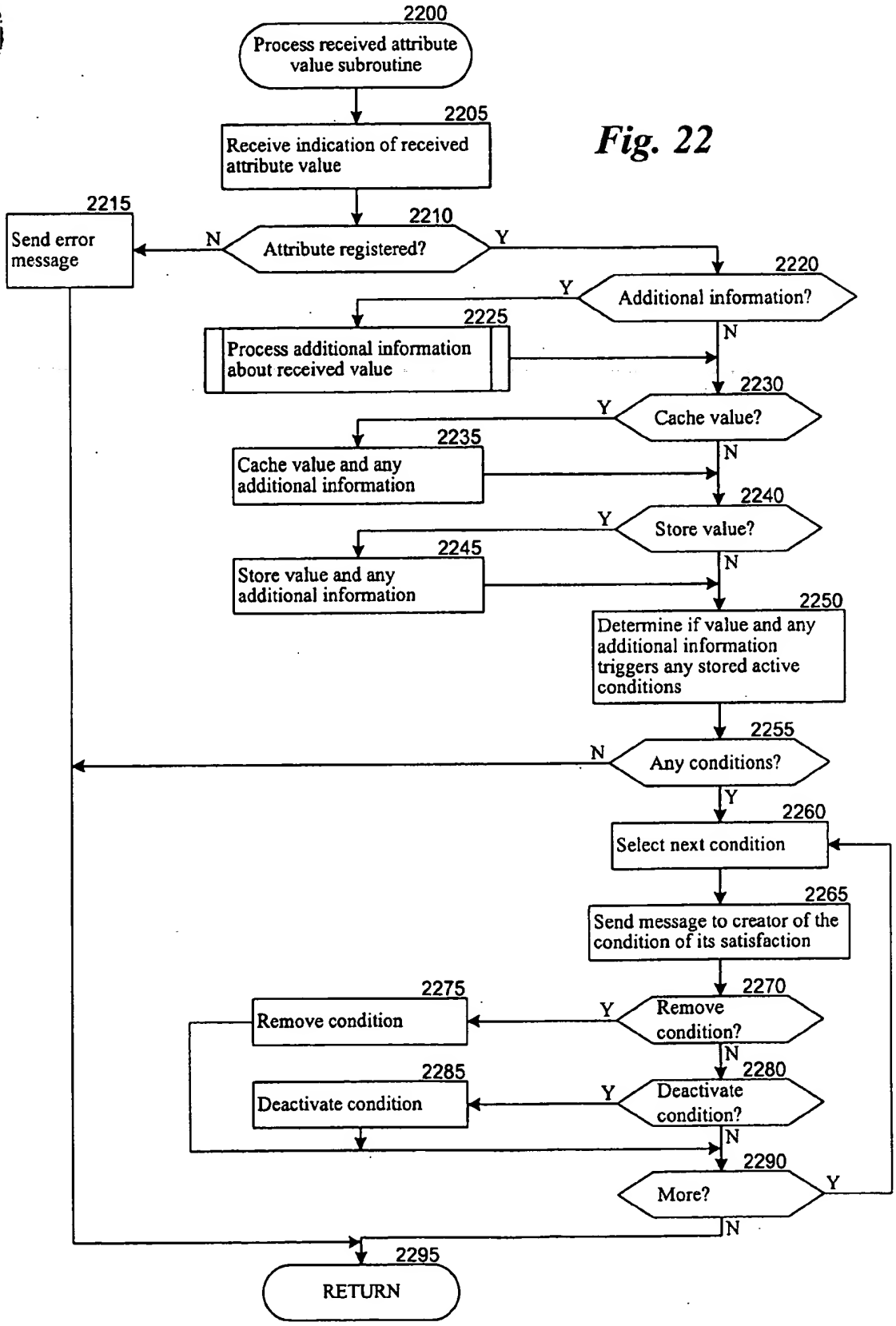

Fig. 22

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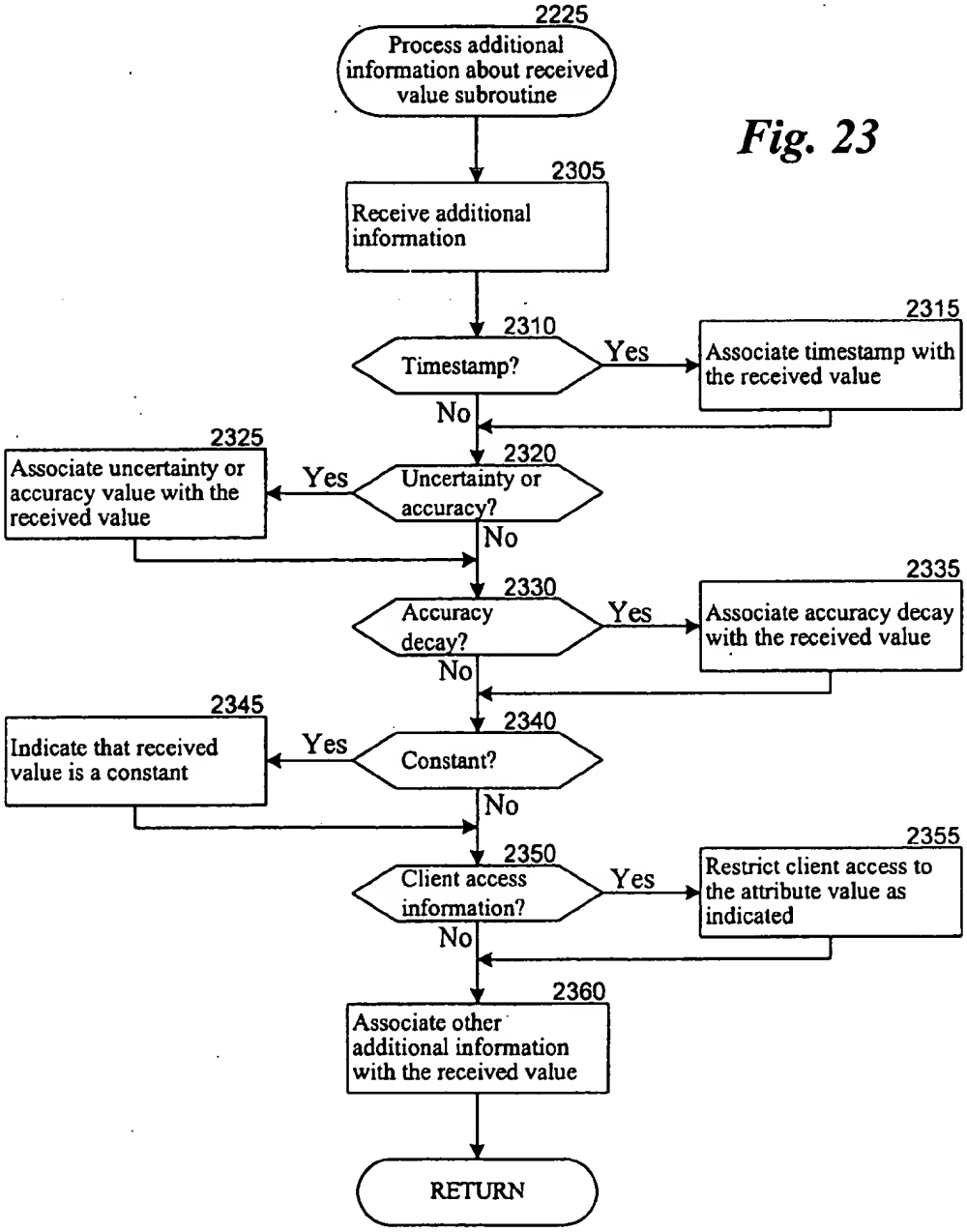

Fig. 23

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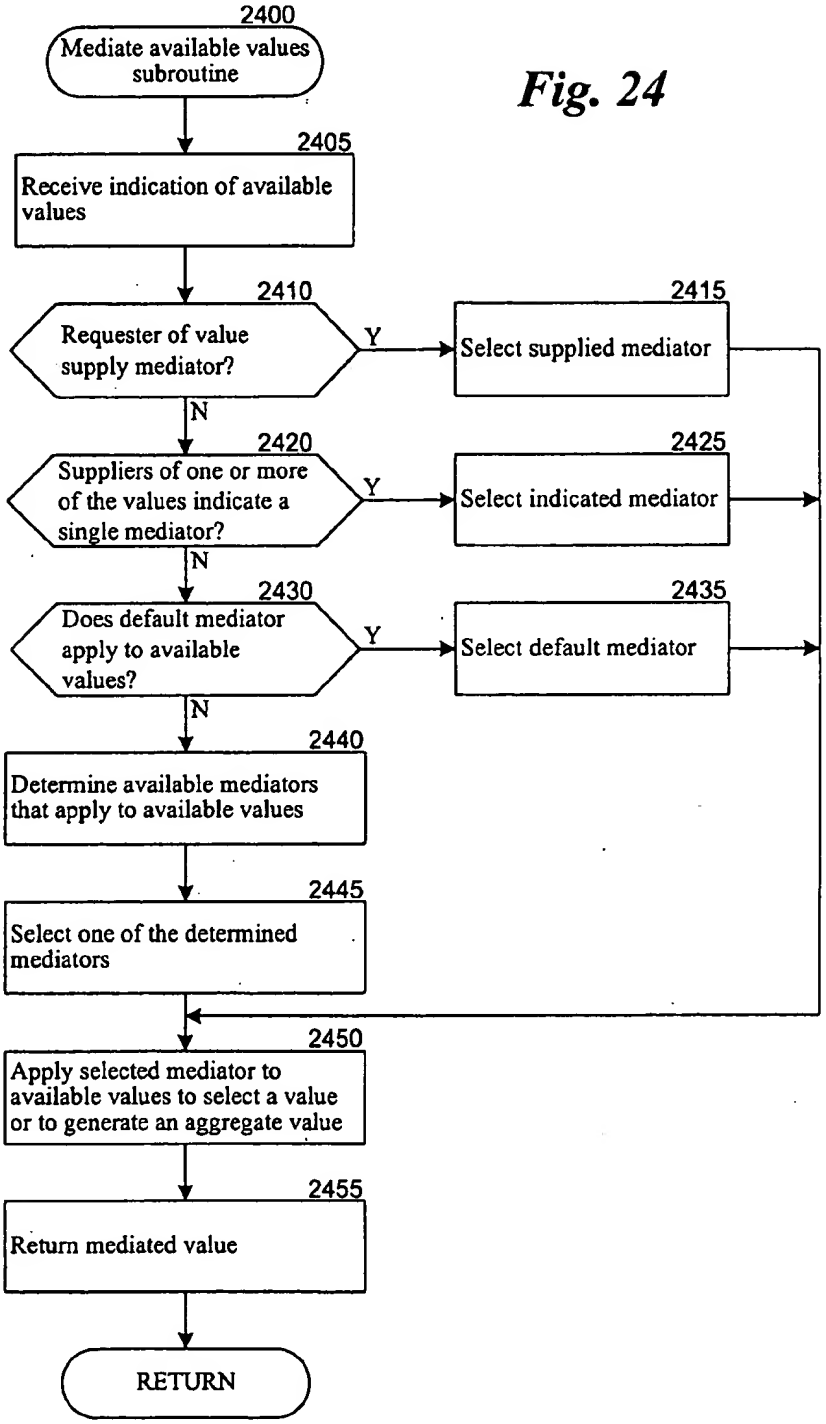
Fig. 24



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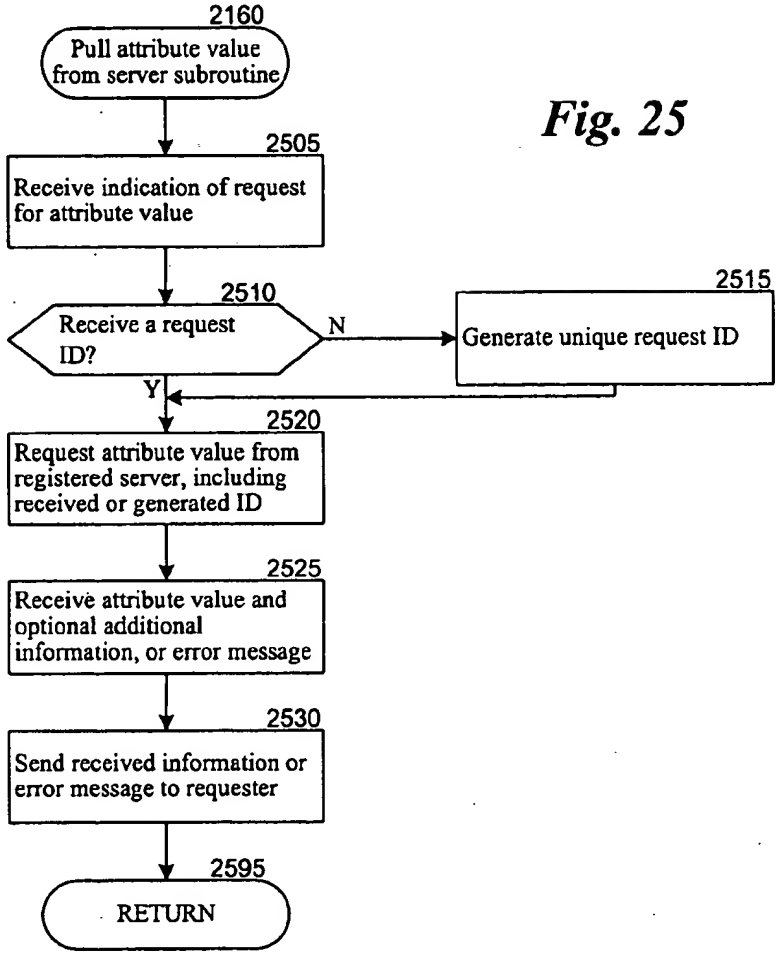

Fig. 25

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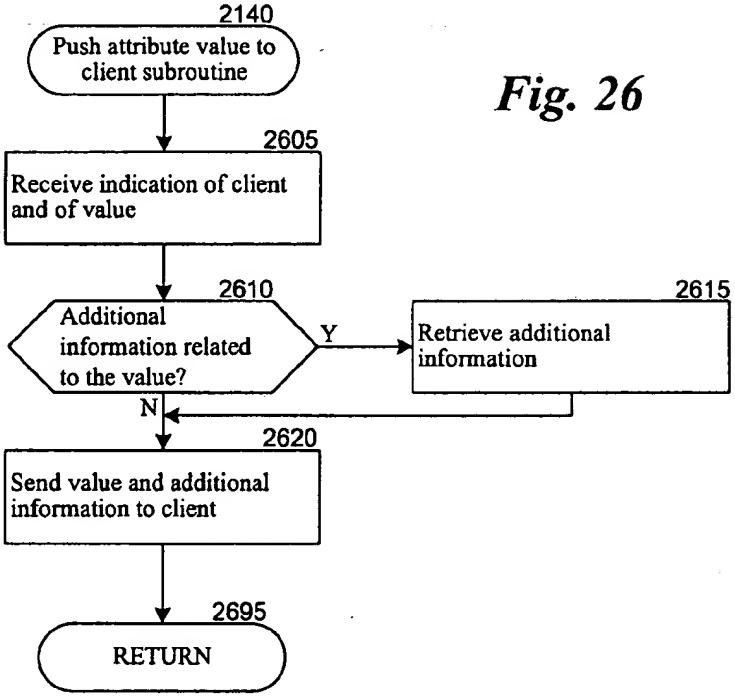

Fig. 26

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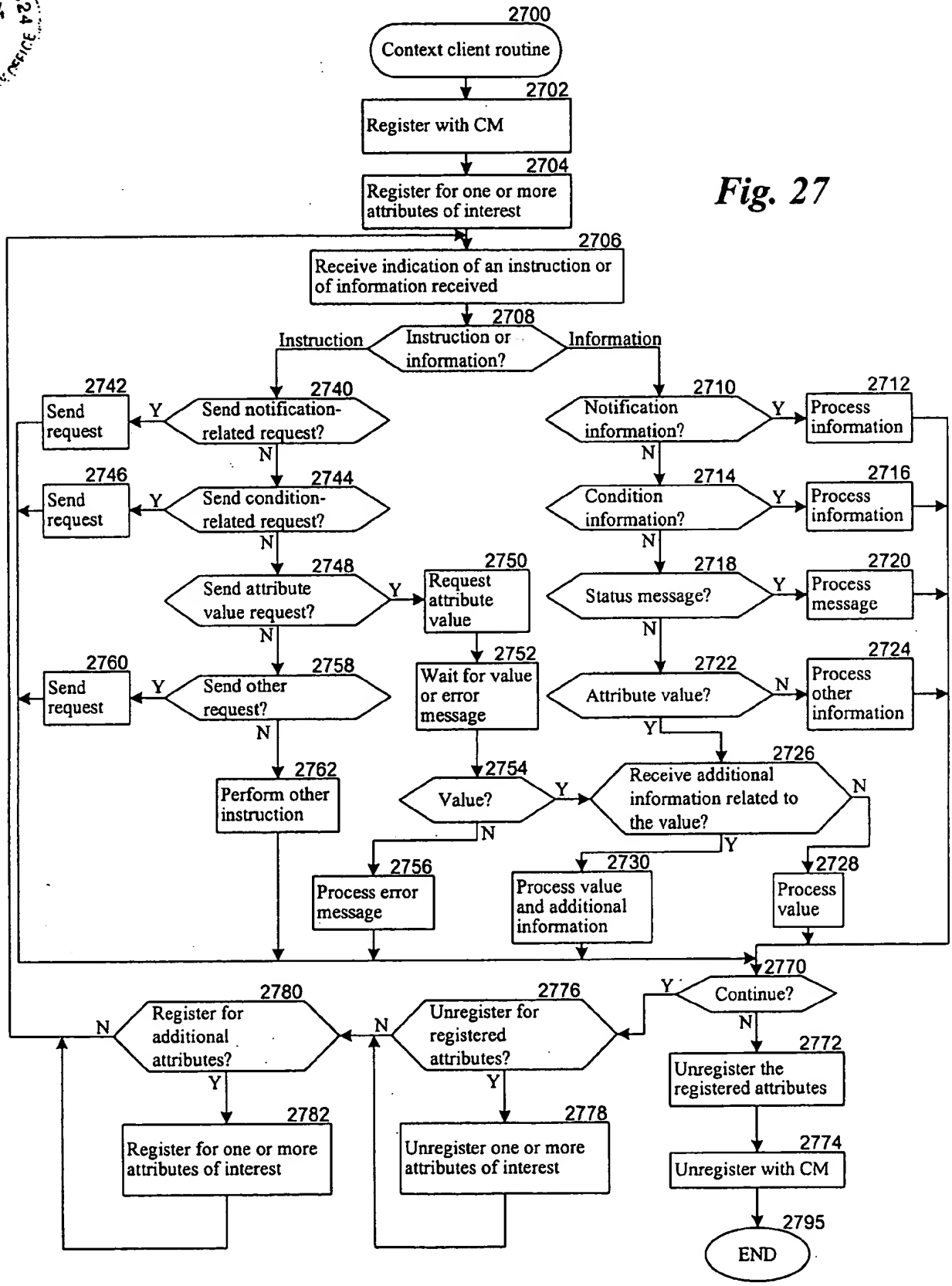

Fig. 27

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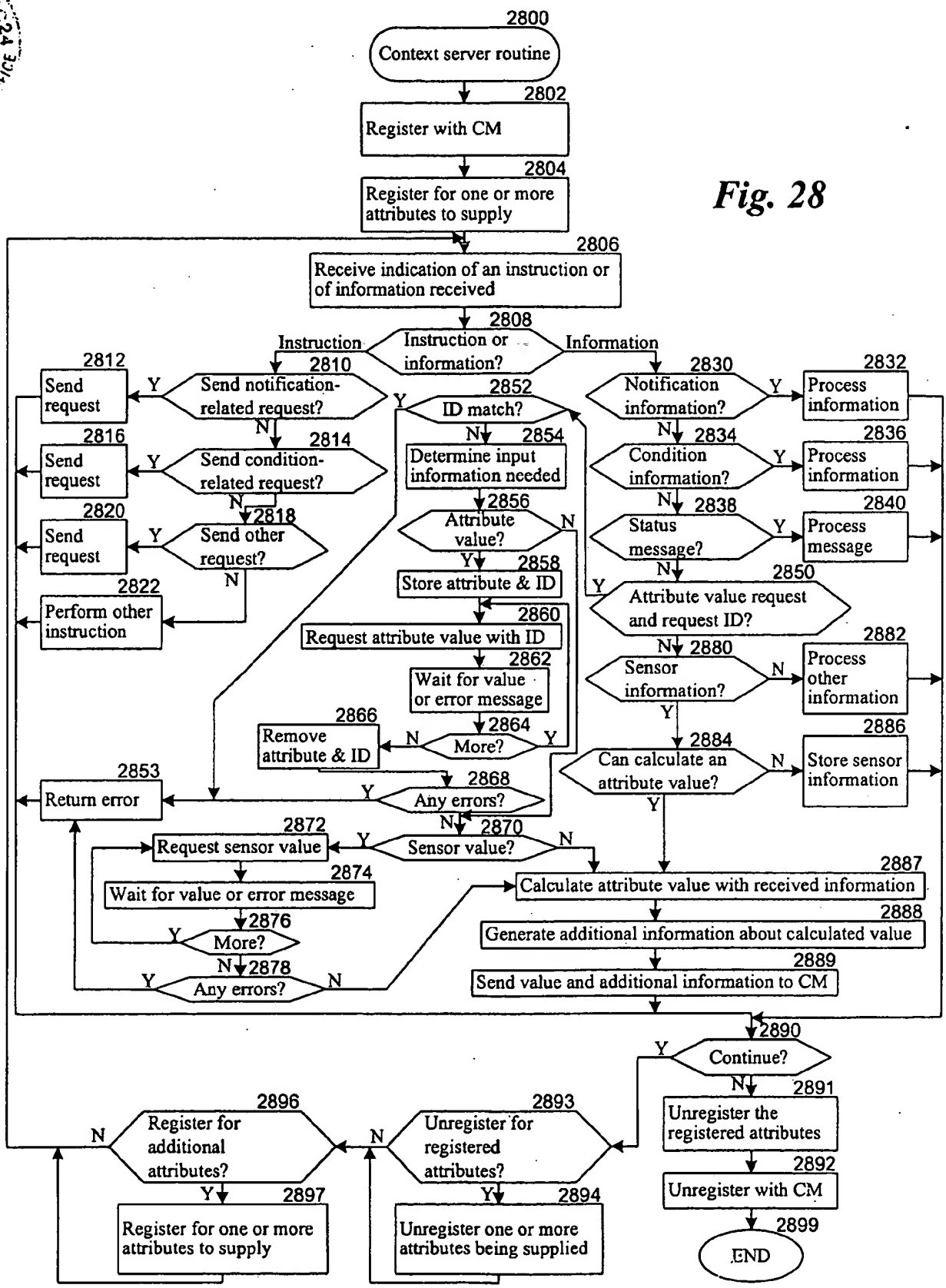
Fig. 28